



**kintech**  
**engineering**

## **WARNING**

The following is a series of wiring diagrams for several different sensors. Please locate the sensor you are going to use in the list below and follow the corresponding wiring diagram and setup in either Atlas or EOL Manager.


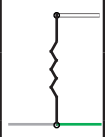



# HUKSEFLUX - OUTPUT: 4-20mA | PYRANOMETER


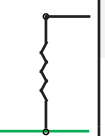



SR20-D2                      SR11-TR

SR15-D2A2                 LP02-TR

SR05-D2A2

## SENSOR WIRING TABLE

Sensor Model	Sensor Pin Manufacturer Colors			Kintech Connector R: 249Ω (1%)			Orbit 360			EOL Zenith	
							Section	Terminal	Type	Section	Type
						White	Analog Channels	47 51 55 59 64 68 72 76 80 87	(-)	Analog Inputs	
	● Grey	Supply (-)	S		Green	Analog Channels	48 52 56 60 65 69 73 77 81 84 85 86 90 91 92	Signal	Analog Inputs		
	● Blue	4-20mA (-)	-		Black	Power Input	(-)	BAT	Extra Analog		
	● Red	Supply (+)	+		Red	Power Input	+	BAT			
	● Pink	4-20mA (+)	+								

Sensor Model	Sensor Pin Manufacturer Colors			Kintech Connector R: 249Ω (1%)			Orbit 360			EOL Zenith	
							Section	Terminal	Type	Section	Type
						Black	Analog Channels	47 51 55 59 64 68 72 76 80 87	(-)	Analog Inputs	
	● Green	Signal (-)	B		Green	Analog Channels	48 52 56 60 65 69 73 77 81 84 85 86 90 91 92	Signal	Analog Inputs		
	○ White	Signal (+)	A		Red	Power Input	+	BAT	Extra Analog		

**Note:** 4 mA → 0 W/m<sup>2</sup>; 20mA → 1600 W/m<sup>2</sup>

### REQUIRED DATA LOGGER VERSION

Minimum data logger required: **ORBIT 360 BASIC PLUS**.

Minimum **firmware** required: **any**.

### HOW TO CONFIGURE IN ATLAS

Start Atlas and open the data logger you are working on. Now go to *Site settings* and scroll down to the *Channels* section and select the following type and model:

- Group: Analog channels
- Sensor Type: Voltage
- Sensor Model: **Volts**
- Slope: 401.6064
- Offset: -400

**Important!** Please make sure you are working with the latest version of Atlas. To check for new updates click the *Check for updates* button in the left-hand menu located in the main dashboard.

## HUKSEFLUX - OUTPUT: 4-20mA | PYRANOMETER

SR20-D2

SR11-TR

SR15-D2A2

LP02-TR

SR05-D2A2

### HOW TO CONFIGURE THIS SENSOR ON SITE

We recommend performing the entire sensor configuration using Atlas at the office before installing sensors onsite. Once the sensor is correctly setup in Atlas, use the *Upload settings* tool, to upload the sensor configuration to the data logger.

In case you are already on site and need to configure the sensor directly on the data logger, follow these steps:

1. Turn on the data logger.
2. Using the keypad on the data logger, navigate the menu until you see *Sensor model*, then click the “right arrow” on the keypad.
3. Now scroll down to the channel you are going to connect the sensor to, and click the “right arrow” on the keypad.
4. Now click “Set” on the keypad and scroll up in the menu to set the sensor model type according to the table here below. Once you have found the correct sensor model, click the “right arrow” key twice to select it and save.
5. Click the “left arrow” several times to go back to the main menu.

Data logger model	Firmware version	Sensor model type on data logger		
		Magnitude	Number	Name
ORBIT 360	any	Solar radiation	01	milliVolts
EOL ZENITH	any	Solar radiation	01	miliVolts

**Keep in mind:** if the sensor channel has been configured as milliVolts, the output values on data logger display will always be shown in milliVolts. Remember to fill in both the slope and the offset for the pyranometer sensor to see real sensor values in  $W/m^2$  in your datasets during a real-time connection with the data logger (from either Atlas or Atlas Mobile).

### HOW TO CONFIGURE IN EOL MANAGER

Open EOL Manager and go to *Settings* of the data logger you are working on. Open the *Inputs* tab and select the following type and model:

- Group: Analog Inputs
- Sensor Type: Voltmeter
- Sensor Model: **Generic Voltmeter**
- Slope: 401.6064
- Offset: -400




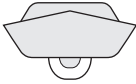
Last modified: 25.06.2021

# HUKSEFLUX - OUTPUT: 4-20mA | ALBEDOMETER

SRA20-D2

SRA15-D2A2

## SENSOR WIRING TABLE

Sensor Model	Sensor Pin Manufacturer Colors		Kintech Connector R: 249Ω (1%)				Orbit 360			EOL Zenith	
							Section	Terminal	Type	Section	Type
 Global Radiation	Grey	Supply (-)	S		White	Analog Channels	47 51 55 59 64 68 72 76 80 87	(-)	Analog Inputs		
	Blue	4-20mA (-)	-		Black	Power Input	(-)		BAT		
	Red	Supply (+)	+		Red	Power Input	+		BAT		
	Pink	4-20mA (+)	+								
	Grey	Supply (-)	S		Green	Analog Channels	48 52 56 60 65 69 73 77 81 84 85 86 90 91 92	Signal	Analog Inputs		
 Reflected Radiation	Blue	4-20mA (-)	-		Black	Power Input	(-)		BAT		
	Red	Supply (+)	+		Red	Power Input	+		BAT		
	Pink	4-20mA (+)	+								
	Grey	Supply (-)	S		White	Analog Channels	47 51 55 59 64 68 72 76 80 87	(-)	Analog Inputs		
	Blue	4-20mA (-)	-		Black	Power Input	(-)		BAT		

**Note:** 4 mA → 0 W/m<sup>2</sup>; 20mA → 1600 W/m<sup>2</sup>

### REQUIRED DATA LOGGER VERSION

Minimum data logger required: **ORBIT 360 BASIC PLUS**.

Minimum **firmware** required: **any**.

### HOW TO CONFIGURE IN ATLAS

Start Atlas and open the data logger you are working on. Now go to *Site settings* and scroll down to the *Channels* section and select the following type and model:

#### GLOBAL RADIATION

- Group: Analog channels
- Sensor Type: Voltage
- Sensor Model: **Volts**
- Slope: 401.6064
- Offset: -400

#### REFLECTED RADIATION

- Group: Analog channels
- Sensor Type: Voltage
- Sensor Model: **Volts**
- Slope: 401.6064
- Offset: -400

**Important!** Please make sure you are working with the latest version of Atlas. To check for new updates click the *Check for updates* button in the left-hand menu located in the main dashboard.

# HUKSEFLUX - OUTPUT: 4-20mA | ALBEDOMETER

SRA20-D2

SRA15-D2A2

## HOW TO CONFIGURE THIS SENSOR ON SITE

We recommend performing the entire sensor configuration using Atlas at the office before installing sensors onsite. Once the sensor is correctly setup in Atlas, use the *Upload settings* tool, to upload the sensor configuration to the data logger.

In case you are already on site and need to configure the sensor directly on the data logger, follow these steps:

1. Turn on the data logger.
2. Using the keypad on the data logger, navigate the menu until you see *Sensor model*, then click the “right arrow” on the keypad.
3. Now scroll down to the channel you are going to connect the sensor to, and click the “right arrow” on the keypad.
4. Now click “Set” on the keypad and scroll up in the menu to set the sensor model type according to the table here below. Once you have found the correct sensor model, click the “right arrow” key twice to select it and save.
5. Click the “left arrow” several times to go back to the main menu.

Data logger model	Firmware version	Sensor model type on data logger		
		Magnitude	Number	Name
ORBIT 360	any	Solar radiation	01	milliVolts
EOL ZENITH	any	Solar radiation	01	miliVolts

**Keep in mind:** if the sensor channel has been configured as milliVolts, the output values on data logger display will always be shown in milliVolts. Remember to fill in both the slope and the offset for the pyranometer sensor to see real sensor values in  $W/m^2$  in your datasets during a real-time connection with the data logger (from either Atlas or Atlas Mobile).

## HOW TO CONFIGURE IN EOL MANAGER

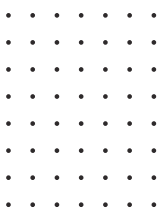
Open EOL Manager and go to *Settings* of the data logger you are working on. Open the *Inputs* tab and select the following type and model:

### GLOBAL RADIATION

- Group: Analog Inputs
- Sensor Type: Voltmeter
- Sensor Model: **Generic Voltmeter**
- Slope: 401.6064
- Offset: -400

### REFLECTED RADIATION

- Group: Analog Inputs
- Sensor Type: Voltmeter
- Sensor Model: **Generic Voltmeter**
- Slope: 401.6064
- Offset: -400



Last modified: 25.06.2021











## HUKSEFLUX - OUTPUT: mV | PYRANOMETER

SR20-T1 SR11

SR15-A1 SR12

SR05-A1 LP02

### SENSOR WIRING TABLE

Sensor Model	Manufacturer Cable Colors		Kintech AMPVAR* Kintech Colors				Orbit 360			EOL Zenith	
							Section	Terminal	Type	Section	Type
		Green	A	K		Brown	Analog Channels	47 51 55 59 64 68 72 76 80 87	(-)	Analog Inputs	
		White	B	L		White	Analog Channels	48 52 56 60 65 69 73 77 81 84 85 86 90 91 92	Signal	Analog Inputs	
				H		Green	Power Input		+	Extra Analog	
				G		Do not connect				BAT	

**Note:** \*AMPVAR amplifier is provided by Kintech Engineering.

Consult to the Solar department ([solar@kintech-engineering.com](mailto:solar@kintech-engineering.com)) for its configuration and Slope and Offset.

### REQUIRED DATA LOGGER VERSION

Minimum data logger required: **ORBIT 360 BASIC PLUS**.

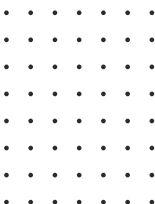
Minimum **firmware** required: **any**.

### HOW TO CONFIGURE IN ATLAS

Start Atlas and open the data logger you are working on. Now go to *Site settings* and scroll down to the *Channels* section and select the following type and model:

- Group: Analog channels
- Sensor Type: Radiation
- Sensor Model: **Thermopile**

**Important!** Please make sure you are working with the latest version of Atlas. To check for new updates click the *Check for updates* button in the left-hand menu located in the main dashboard.



## HUKSEFLUX - OUTPUT: mV | PYRANOMETER

SR20-T1	SR11
SR15-A1	SR12
SR05-A1	LP02

### HOW TO CONFIGURE THIS SENSOR ON SITE

We recommend performing the entire sensor configuration using Atlas at the office before installing sensors onsite. Once the sensor is correctly setup in Atlas, use the *Upload settings* tool, to upload the sensor configuration to the data logger.

In case you are already on site and need to configure the sensor directly on the data logger, follow these steps:

1. Turn on the data logger.
2. Using the keypad on the data logger, navigate the menu until you see *Sensor model*, then click the “right arrow” on the keypad.
3. Now scroll down to the channel you are going to connect the sensor to, and click the “right arrow” on the keypad.
4. Now click “Set” on the keypad and scroll up in the menu to set the sensor model type according to the table here below. Once you have found the correct sensor model, click the “right arrow” key twice to select it and save.
5. Click the “left arrow” several times to go back to the main menu.

Data logger model	Firmware version	Sensor model type on data logger		
		Magnitude	Number	Name
ORBIT 360	any	Solar radiation	42	THERMOPILE
EOL ZENITH	any	Solar radiation	42	THERMOPILE

### HOW TO CONFIGURE IN EOL MANAGER

Open EOL Manager and go to *Settings* of the data logger you are working on. Open the *Inputs* tab and select the following type and model:

- Group: Analog Inputs
- Sensor Type: Radiation
- Sensor Model: **Thermopile**






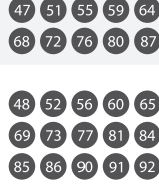



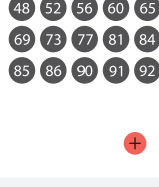




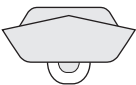


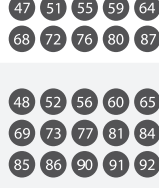



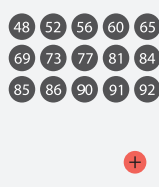




Last modified: 25.06.2021

# HUKSEFLUX - OUTPUT: mV | ALBEDOMETER

SRA20-T1 2X SR11 + AMF02 mounting fixture

SRA15-A1

## SENSOR WIRING TABLE

Sensor Model	Manufacturer Cable Colors		Kintech AMPVAR* Kintech Colors				Orbit 360			EOL Zenith	
							Section	Terminal	Type	Section	Type
 Global Radiation		Green	A	K		Brown	Analog Channels		(-)	Analog Inputs	
		White	B	L		White	Analog Channels		Signal	Analog Inputs	
				H		Green	Power Input			Extra Analog	
				G	Do not connect						BAT
 Reflected Radiation		Green	A	K		Brown	Analog Channels		(-)	Analog Inputs	
		White	B	L		White	Analog Channels		Signal	Analog Inputs	
				H		Green	Power Input			Extra Analog	
				G	Do not connect						BAT

**Note:** \*AMPVAR amplifier is provided by Kintech Engineering.  
 Consult to the Solar department ([solar@kintech-engineering.com](mailto:solar@kintech-engineering.com)) for its configuration and Slope and Offset.

### REQUIRED DATA LOGGER VERSION

Minimum data logger required: **ORBIT 360 BASIC PLUS**.  
 Minimum **firmware** required: **any**.

### HOW TO CONFIGURE IN ATLAS

Start Atlas and open the data logger you are working on. Now go to *Site settings* and scroll down to the *Channels* section and select the following type and model:

- GLOBAL RADIATION
- Group: Analog channels
  - Sensor Type: Radiation
  - Sensor Model: **Thermopile**

- REFLECTED RADIATION
- Group: Analog channels
  - Sensor Type: Radiation
  - Sensor Model: **Thermopile**

**Important!** Please make sure you are working with the latest version of Atlas. To check for new updates click the *Check for updates* button in the left-hand menu located in the main dashboard.





## HUKSEFLUX - OUTPUT: mV | ALBEDOMETER

SRA20-T1                    2X SR11 + AMF02 mounting fixture

SRA15-A1

### HOW TO CONFIGURE THIS SENSOR ON SITE

We recommend performing the entire sensor configuration using Atlas at the office before installing sensors onsite. Once the sensor is correctly setup in Atlas, use the *Upload settings* tool, to upload the sensor configuration to the data logger.

In case you are already on site and need to configure the sensor directly on the data logger, follow these steps:

1. Turn on the data logger.
2. Using the keypad on the data logger, navigate the menu until you see *Sensor model*, then click the “right arrow” on the keypad.
3. Now scroll down to the channel you are going to connect the sensor to, and click the “right arrow” on the keypad.
4. Now click “Set” on the keypad and scroll up in the menu to set the sensor model type according to the table here below. Once you have found the correct sensor model, click the “right arrow” key twice to select it and save.
5. Click the “left arrow” several times to go back to the main menu.

Data logger model	Firmware version	Sensor model type on data logger		
		Magnitude	Number	Name
ORBIT 360	any	Solar radiation	42	THERMOPILE
EOL ZENITH	any	Solar radiation	42	THERMOPILE

### HOW TO CONFIGURE IN EOL MANAGER

Open EOL Manager and go to *Settings* of the data logger you are working on. Open the *Inputs* tab and select the following type and model:

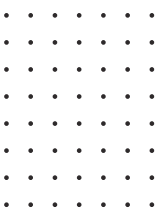
#### GLOBAL RADIATION

- Group: Analog Inputs
- Sensor Type: Radiation
- Sensor Model: **Thermopile**

#### REFLECTED RADIATION

- Group: Analog Inputs
- Sensor Type: Radiation
- Sensor Model: **Thermopile**

*Last modified: 25.06.2021*



## KIPP & ZONEN - OUTPUT: 4-20mA | PYRANOMETER

SMP3

SMP6


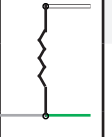

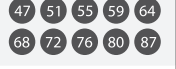














SMP10

SMP11

SMP21

SMP22

### SENSOR WIRING TABLE

Sensor Model	Sensor Pin Manufacturer Colors		Kintech Connector R: 249Ω (1%)				Orbit 360			EOL Zenith	
							Section	Terminal	Type	Section	Type
						White	Analog Channels		(-)	Analog Inputs	
		Green	4-20mA (+)	S		Green	Analog Channels		Signal	Analog Inputs	
		Brown	4-20mA (-)	-		Black	Power Input		(-)	BAT	
		Black	Supply (-)				Power Input			BAT	
		White	Supply (+)	+		Red	Power Input			BAT	

**Note:** 4 mA → 0 W/m<sup>2</sup>; 20mA → 1600 W/m<sup>2</sup>

### REQUIRED DATA LOGGER VERSION

Minimum data logger required: **ORBIT 360 BASIC PLUS**.

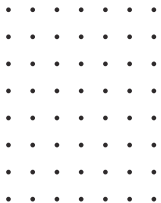
Minimum **firmware** required: **any**.

### HOW TO CONFIGURE IN ATLAS

Start Atlas and open the data logger you are working on. Now go to *Site settings* and scroll down to the *Channels* section and select the following type and model:

- Group: Analog channels
- Sensor Type: Radiation
- Sensor Model: **Thermopile**
- Sensor Type: 401.6064
- Sensor Type: -400

**Important!** Please make sure you are working with the latest version of Atlas. To check for new updates click the *Check for updates* button in the left-hand menu located in the main dashboard.



## KIPP & ZONEN - OUTPUT: 4-20mA | PYRANOMETER

SMP3

SMP6

SMP10

SMP11

SMP21

SMP22

### HOW TO CONFIGURE THIS SENSOR ON SITE

We recommend performing the entire sensor configuration using Atlas at the office before installing sensors onsite. Once the sensor is correctly setup in Atlas, use the *Upload settings* tool, to upload the sensor configuration to the data logger.

In case you are already on site and need to configure the sensor directly on the data logger, follow these steps:

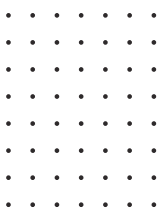
1. Turn on the data logger.
2. Using the keypad on the data logger, navigate the menu until you see *Sensor model*, then click the “right arrow” on the keypad.
3. Now scroll down to the channel you are going to connect the sensor to, and click the “right arrow” on the keypad.
4. Now click “Set” on the keypad and scroll up in the menu to set the sensor model type according to the table here below. Once you have found the correct sensor model, click the “right arrow” key twice to select it and save.
5. Click the “left arrow” several times to go back to the main menu.

Data logger model	Firmware version	Sensor model type on data logger		
		Magnitude	Number	Name
ORBIT 360	any	Solar radiation	42	THERMOPILE
EOL ZENITH	any	Solar radiation	42	THERMOPILE

### HOW TO CONFIGURE IN EOL MANAGER

Open EOL Manager and go to *Settings* of the data logger you are working on. Open the *Inputs* tab and select the following type and model:

- Group: Analog Inputs
- Sensor Type: Radiation
- Sensor Model: **Thermopile**
- Sensor Type: 401.6064
- Sensor Type: -400



Last modified: 28.06.2021

# KIPP & ZONEN - OUTPUT: 4-20mA | ALBEDOMETER

SMP3 + mounting rod










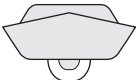

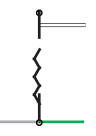






SMA6

SMA11

SMP21 + CMF1 mounting fixture

SMP22 + CMF1 mounting fixture

## SENSOR WIRING TABLE

Sensor Model	Sensor Pin Manufacturer Colors			Kintech Connector R: 249Ω (1%)			Orbit 360			EOL Zenith	
							Section	Terminal	Type	Section	Type
 Global Radiation	 Green	4-20mA (+)	S		 White	Analog Channels	47 51 55 59 64 68 72 76 80 87	(-)	Analog Inputs		
						Analog Channels	48 52 56 60 65 69 73 77 81 84 85 86 90 91 92		Signal	 	
						Power Input	(-)	BAT			
						Power Input	(+)	BAT			
 Reflected Radiation	 Green	4-20mA (+)	S		 White	Analog Channels	47 51 55 59 64 68 72 76 80 87	(-)	Analog Inputs		
						Analog Channels	48 52 56 60 65 69 73 77 81 84 85 86 90 91 92		Signal	 	
						Power Input	(-)	BAT			
						Power Input	(+)	BAT			

**Note:** 4 mA → 0 W/m<sup>2</sup>; 20mA → 1600 W/m<sup>2</sup>

### REQUIRED DATA LOGGER VERSION

Minimum data logger required: **ORBIT 360 BASIC PLUS**.

Minimum **firmware** required: **any**.

### HOW TO CONFIGURE IN ATLAS

Start Atlas and open the data logger you are working on. Now go to *Site settings* and scroll down to the *Channels* section and select the following type and model:

#### GLOBAL RADIATION

- Group: Analog channels
- Sensor Type: Radiation
- Sensor Model: **Thermopile**
- Slope: 401.6064
- Offset: -400

#### REFLECTED RADIATION

- Group: Analog channels
- Sensor Type: Radiation
- Sensor Model: **Thermopile**
- Slope: 401.6064
- Offset: -400

**Important!** Please make sure you are working with the latest version of Atlas. To check for new updates click the *Check for*

## KIPP & ZONEN - OUTPUT: mV | ALBEDOMETER

SMP3 + mounting rod

SMA6

SMA11

SMP21 + CMF1 mounting fixture

SMP22 + CMF1 mounting fixture

### HOW TO CONFIGURE THIS SENSOR ON SITE

We recommend performing the entire sensor configuration using Atlas at the office before installing sensors onsite. Once the sensor is correctly setup in Atlas, use the *Upload settings* tool, to upload the sensor configuration to the data logger.

In case you are already on site and need to configure the sensor directly on the data logger, follow these steps:

1. Turn on the data logger.
2. Using the keypad on the data logger, navigate the menu until you see *Sensor model*, then click the “right arrow” on the keypad.
3. Now scroll down to the channel you are going to connect the sensor to, and click the “right arrow” on the keypad.
4. Now click “Set” on the keypad and scroll up in the menu to set the sensor model type according to the table here below. Once you have found the correct sensor model, click the “right arrow” key twice to select it and save.
5. Click the “left arrow” several times to go back to the main menu.

Data logger model	Firmware version	Sensor model type on data logger		
		Magnitude	Number	Name
ORBIT 360	any	Solar radiation	42	THERMOPILE
EOL ZENITH	any	Solar radiation	42	THERMOPILE

### HOW TO CONFIGURE IN EOL MANAGER

Open EOL Manager and go to *Settings* of the data logger you are working on. Open the *Inputs* tab and select the following type and model:

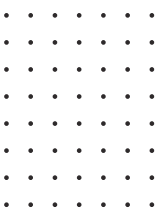
#### GLOBAL RADIATION

- Group: Analog Inputs
- Sensor Type: Radiation
- Sensor Model: **Thermopile**
- Slope: 401.6064
- Offset: -400

#### REFLECTED RADIATION

- Group: Analog Inputs
- Sensor Type: Radiation
- Sensor Model: **Thermopile**
- Slope: 401.6064
- Offset: -400




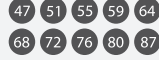









Last modified: 28.06.2021



## KIPP & ZONEN - OUTPUT: mV | PYRANOMETER

CMP3                      CMP6                      CMP10  
 CMP11                    CMP21                    CMP22

### SENSOR WIRING TABLE

Sensor Model	Manufacturer Cable Colors		Kintech AMPVAR* Kintech Colors				Orbit 360			EOL Zenith	
							Section	Terminal	Type	Section	Type
		Blue	A	K		Brown	Analog Channels		(-)	Analog Inputs	
		Red	B	L		White	Analog Channels		Signal	Analog Inputs	
				H		Green	Power Input			Extra Analog	
				G		Do not connect				BAT	

**Note:** \*AMPVAR amplifier is provided by Kintech Engineering.  
 Consult to the Solar department ([solar@kintech-engineering.com](mailto:solar@kintech-engineering.com)) for its configuration and Slope and Offset.

### REQUIRED DATA LOGGER VERSION

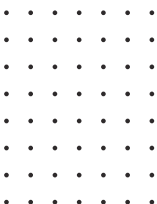
Minimum data logger required: **ORBIT 360 BASIC PLUS**.  
 Minimum **firmware** required: **any**.

### HOW TO CONFIGURE IN ATLAS

Start Atlas and open the data logger you are working on. Now go to *Site settings* and scroll down to the *Channels* section and select the following type and model:

- Group: Analog channels
- Sensor Type: Radiation
- Sensor Model: **Thermopile**

**Important!** Please make sure you are working with the latest version of Atlas. To check for new updates click the *Check for updates* button in the left-hand menu located in the main dashboard.



## KIPP & ZONEN - OUTPUT: mV | PYRANOMETER

CMP3                      CMP6                      CMP10  
CMP11                    CMP21                    CMP22

### HOW TO CONFIGURE THIS SENSOR ON SITE

We recommend performing the entire sensor configuration using Atlas at the office before installing sensors onsite. Once the sensor is correctly setup in Atlas, use the *Upload settings* tool, to upload the sensor configuration to the data logger.

In case you are already on site and need to configure the sensor directly on the data logger, follow these steps:

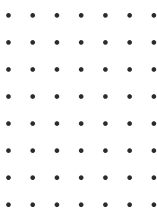
1. Turn on the data logger.
2. Using the keypad on the data logger, navigate the menu until you see *Sensor model*, then click the “right arrow” on the keypad.
3. Now scroll down to the channel you are going to connect the sensor to, and click the “right arrow” on the keypad.
4. Now click “Set” on the keypad and scroll up in the menu to set the sensor model type according to the table here below. Once you have found the correct sensor model, click the “right arrow” key twice to select it and save.
5. Click the “left arrow” several times to go back to the main menu.

Data logger model	Firmware version	Sensor model type on data logger		
		Magnitude	Number	Name
ORBIT 360	any	Solar radiation	42	THERMOPILE
EOL ZENITH	any	Solar radiation	42	THERMOPILE

### HOW TO CONFIGURE IN EOL MANAGER

Open EOL Manager and go to *Settings* of the data logger you are working on. Open the *Inputs* tab and select the following type and model:

- Group: Analog Inputs
- Sensor Type: Radiation
- Sensor Model: **Thermopile**



Last modified: 28.06.2021

# KIPP & ZONEN - OUTPUT: mV | ALBEDOMETER

CMP3 + mounting rod


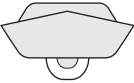
CMA6

CMA11

CMP21 + CMF1 mounting fixture

CMP22 + CMF1 mounting fixture

## SENSOR WIRING TABLE

Sensor Model	Manufacturer Cable Colors		Kintech AMPVAR* Kintech Colors				Orbit 360			EOL Zenith	
							Section	Terminal	Type	Section	Type
 Global Radiation	Blue	Blue	A	K	Brown	Analog Channels	47 51 55 59 64 68 72 76 80 87	(-)	Analog Inputs	-	
											Red
	Green	H	Do not connect	Power Input	+	BAT	+				
								Do not connect	G	Do not connect	Power Input
 Reflected Radiation	Blue	Blue	A	K	Brown	Analog Channels	47 51 55 59 64 68 72 76 80 87				
								Red	B	L	White
	Green	H	Do not connect	Power Input	+	BAT	+				
								Do not connect	G	Do not connect	Power Input

**Note:** \*AMPVAR amplifier is provided by Kintech Engineering.

Consult to the Solar department ([solar@kintech-engineering.com](mailto:solar@kintech-engineering.com)) for its configuration and Slope and Offset.

### REQUIRED DATA LOGGER VERSION

Minimum data logger required: **ORBIT 360 BASIC PLUS**.

Minimum **firmware** required: **any**.

### HOW TO CONFIGURE IN ATLAS

Start Atlas and open the data logger you are working on. Now go to *Site settings* and scroll down to the *Channels* section and select the following type and model:

#### GLOBAL RADIATION

- Group: Analog channels
- Sensor Type: Radiation
- Sensor Model: **Thermopile**

#### REFLECTED RADIATION

- Group: Analog channels
- Sensor Type: Radiation
- Sensor Model: **Thermopile**

**Important!** Please make sure you are working with the latest version of Atlas. To check for new updates click the *Check for updates* button in the left-hand menu located in the main dashboard.





## KIPP & ZONEN - OUTPUT: mV | ALBEDOMETER

CMP3 + mounting rod

CMA6

CMA11

CMP21 + CMF1 mounting fixture

CMP22 + CMF1 mounting fixture

### HOW TO CONFIGURE THIS SENSOR ON SITE

We recommend performing the entire sensor configuration using Atlas at the office before installing sensors onsite. Once the sensor is correctly setup in Atlas, use the *Upload settings* tool, to upload the sensor configuration to the data logger.

In case you are already on site and need to configure the sensor directly on the data logger, follow these steps:

1. Turn on the data logger.
2. Using the keypad on the data logger, navigate the menu until you see *Sensor model*, then click the “right arrow” on the keypad.
3. Now scroll down to the channel you are going to connect the sensor to, and click the “right arrow” on the keypad.
4. Now click “Set” on the keypad and scroll up in the menu to set the sensor model type according to the table here below. Once you have found the correct sensor model, click the “right arrow” key twice to select it and save.
5. Click the “left arrow” several times to go back to the main menu.

Data logger model	Firmware version	Sensor model type on data logger		
		Magnitude	Number	Name
ORBIT 360	any	Solar radiation	42	THERMOPILE
EOL ZENITH	any	Solar radiation	42	THERMOPILE

### HOW TO CONFIGURE IN EOL MANAGER

Open EOL Manager and go to *Settings* of the data logger you are working on. Open the *Inputs* tab and select the following type and model:

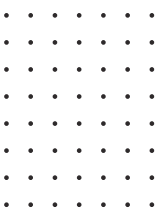
#### GLOBAL RADIATION

- Group: Analog Inputs
- Sensor Type: Radiation
- Sensor Model: **Thermopile**

#### REFLECTED RADIATION


- Group: Analog Inputs
- Sensor Type: Radiation
- Sensor Model: **Thermopile**

Last modified: 28.06.2021





# EKO MS80 | PYRANOMETER

## SENSOR WIRING TABLE

Sensor Model	Manufacturer Cable Colors		Kintech AMPVAR* Kintech Colors				Orbit 360			EOL Zenith	
							Section	Terminal	Type	Section	Type
 <b>MS80-MS80S</b> mV output	○	White	A	K	●	Brown	Analog Channels	47 51 55 59 64 68 72 76 80 87	(-)	Analog Inputs	[-] [-]
	●	Brown	B	L	○	White	Analog Channels	48 52 56 60 65 69 73 77 81 84 85 86 90 91 92	Signal	Analog Inputs	[1] [2] [3] [4] [5]
				H	●	Green	Power Input		+	Extra Analog	[1] [2] [3] [4] [5] [6] [7] [8]
				G		Do not connect				BAT	[+]

**Note:** \*AMPVAR amplifier is provided by Kintech Engineering.  
 Consult to the Solar department (solar@kintech-engineering.com) for its configuration and Slope and Offset.

Sensor Model	Sensor Pin Manufacturer Colors		Kintech Connector R: 249Ω (1%)				Orbit 360			EOL Zenith	
							Section	Terminal	Type	Section	Type
 <b>MS80S</b> 4-20mA output	●	Grey	Supply (-)	S	○	White	Analog Channels	47 51 55 59 64 68 72 76 80 87	(-)	Analog Inputs	[-] [-]
	○	White	4-20mA (-)	-	●	Green	Analog Channels	48 52 56 60 65 69 73 77 81 84 85 86 90 91 92	Signal	Analog Inputs	[1] [2] [3] [4] [5]
	○	White	4-20mA (-)	-	●	Black	Power Input		(-)	Extra Analog	[1] [2] [3] [4] [5] [6] [7] [8]
	●	Brown	Supply (+)	+	●	Red	Power Input		+	BAT	[-]
			Do not connected	+						BAT	[+]

Sensor Model	Sensor Pin Manufacturer Colors		Kintech Connector R: 249Ω (1%)				Orbit 360			EOL Zenith	
							Section	Terminal	Type	Section	Type
 <b>MS80A</b> 4-20mA output					●	Black	Analog Channels	47 51 55 59 64 68 72 76 80 87	(-)	Analog Inputs	[-] [-]
	○	White	Signal (-)	B	●	Green	Analog Channels	48 52 56 60 65 69 73 77 81 84 85 86 90 91 92	Signal	Analog Inputs	[1] [2] [3] [4] [5]
	●	Brown	Signal (+)	A	●	Red	Power Input		+	Extra Analog	[1] [2] [3] [4] [5] [6] [7] [8]

**Note:** 4 mA → 0 W/m<sup>2</sup>; 20mA → 1600 W/m<sup>2</sup>

### REQUIRED DATA LOGGER VERSION

Minimum data logger required: **ORBIT 360 BASIC PLUS.**

Minimum **firmware** required: **any.**



## EKO MS80 | PYRANOMETER

**Important!** Please make sure you are working with the latest version of Atlas. To check for new updates click the *Check for updates* button in the left-hand menu located in the main dashboard.

### HOW TO CONFIGURE IN ATLAS

Start Atlas and open the data logger you are working on. Now go to *Site settings* and scroll down to the *Channels* section and select the following type and model:

MS80S/MS80 (mV output)

- Group: Analog channels
- Sensor Type: Radiation
- Sensor Model: **Thermopile**

MS80S/MS80A (4-20mA output)

- Group: Analog channels
- Sensor Type: Radiation
- Sensor Model: **Thermopile**
- Slope: 401.6064
- Offset: -400

### HOW TO CONFIGURE THIS SENSOR ON SITE

We recommend performing the entire sensor configuration using Atlas at the office before installing sensors onsite. Once the sensor is correctly setup in Atlas, use the *Upload settings* tool, to upload the sensor configuration to the data logger.

In case you are already on site and need to configure the sensor directly on the data logger, follow these steps:

1. Turn on the data logger.
2. Using the keypad on the data logger, navigate the menu until you see *Sensor model*, then click the “right arrow” on the keypad.
3. Now scroll down to the channel you are going to connect the sensor to, and click the “right arrow” on the keypad.
4. Now click “Set” on the keypad and scroll up in the menu to set the sensor model type according to the table here below. Once you have found the correct sensor model, click the “right arrow” key twice to select it and save.
5. Click the “left arrow” several times to go back to the main menu.

Data logger model	Firmware version	Sensor model type on data logger		
		Magnitude	Number	Name
ORBIT 360	any	Solar radiation	42	THERMOPILE
EOL ZENITH	any	Solar radiation	42	THERMOPILE

### HOW TO CONFIGURE IN EOL MANAGER

Open EOL Manager and go to *Settings* of the data logger you are working on. Open the *Inputs* tab and select the following type and model:

MS80S/MS80 (mV output)

- Group: Analog Inputs
- Sensor Type: Radiation
- Sensor Model: **Thermopile**

MS80S/MS80A (4-20mA output)












- Group: Analog Inputs
- Sensor Type: Radiation
- Sensor Model: **Thermopile**
- Slope: 401.6064
- Offset: -400

Last modified: 29.06.2021
























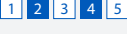



# EKO MS60 | PYRANOMETER

## SENSOR WIRING TABLE

Sensor Model	Manufacturer Cable Colors		Kintech AMPVAR* Kintech Colors				Orbit 360			EOL Zenith		
							Section	Terminal	Type	Section	Type	
 <b>MS60</b> mV output		Brown	A	K		Brown	Analog Channels	47 51 55 59 64 68 72 76 80 87	(-)	Analog Inputs		
		White	B	L		White	Analog Channels	48 52 56 60 65 69 73 77 81 84 85 86 90 91 92	Signal	Analog Inputs		
				H		Green	Power Input				Extra Analog	
				G		Do not connect					BAT	

**Note:** \*AMPVAR amplifier is provided by Kintech Engineering.  
 Consult to the Solar department (solar@kintech-engineering.com) for its configuration and Slope and Offset.

Sensor Model	Sensor Pin Manufacturer Colors		Kintech Connector R: 249Ω (1%)				Orbit 360			EOL Zenith		
							Section	Terminal	Type	Section	Type	
 <b>MS60S</b> 4-20mA output		Grey	Supply (-)	S		White	Analog Channels	47 51 55 59 64 68 72 76 80 87	(-)	Analog Inputs		
		White	4-20mA (-)	-		Green	Analog Channels	48 52 56 60 65 69 73 77 81 84 85 86 90 91 92	Signal	Analog Inputs		
		Black	Supply (+)	+		Black	Power Input		(-)	BAT		
		Brown	Supply (+)	+		Red	Power Input				BAT	
			Do not connected	+								

Sensor Model	Sensor Pin Manufacturer Colors		Kintech Connector R: 249Ω (1%)				Orbit 360			EOL Zenith	
							Section	Terminal	Type	Section	Type
 <b>MS60A</b> 4-20mA output		White	Signal (-)	B		Black	Analog Channels	47 51 55 59 64 68 72 76 80 87	(-)	Analog Inputs	
		Green	Signal (+)	A		Green	Analog Channels	48 52 56 60 65 69 73 77 81 84 85 86 90 91 92	Signal	Analog Inputs	
		Brown	Signal (+)	A		Red	Power Input				Extra Analog

**Note:** 4 mA → 0 W/m<sup>2</sup>; 20mA → 1600 W/m<sup>2</sup>

### REQUIRED DATA LOGGER VERSION

Minimum data logger required: **ORBIT 360 BASIC PLUS.**

Minimum **firmware** required: **any.**

## EKO MS60 | PYRANOMETER

**Important!** Please make sure you are working with the latest version of Atlas. To check for new updates click the *Check for updates* button in the left-hand menu located in the main dashboard.

### HOW TO CONFIGURE IN ATLAS

Start Atlas and open the data logger you are working on. Now go to *Site settings* and scroll down to the *Channels* section and select the following type and model:

MS60S/MS60 (mV output)

- Group: Analog channels
- Sensor Type: Radiation
- Sensor Model: **Thermopile**

MS60S/MS60A (4-20mA output)

- Group: Analog channels
- Sensor Type: Radiation
- Sensor Model: **Thermopile**
- Slope: 401.6064
- Offset: -400

### HOW TO CONFIGURE THIS SENSOR ON SITE

We recommend performing the entire sensor configuration using Atlas at the office before installing sensors onsite. Once the sensor is correctly setup in Atlas, use the *Upload settings* tool, to upload the sensor configuration to the data logger.

In case you are already on site and need to configure the sensor directly on the data logger, follow these steps:

1. Turn on the data logger.
2. Using the keypad on the data logger, navigate the menu until you see *Sensor model*, then click the “right arrow” on the keypad.
3. Now scroll down to the channel you are going to connect the sensor to, and click the “right arrow” on the keypad.
4. Now click “Set” on the keypad and scroll up in the menu to set the sensor model type according to the table here below. Once you have found the correct sensor model, click the “right arrow” key twice to select it and save.
5. Click the “left arrow” several times to go back to the main menu.

Data logger model	Firmware version	Sensor model type on data logger		
		Magnitude	Number	Name
ORBIT 360	any	Solar radiation	42	THERMOPILE
EOL ZENITH	any	Solar radiation	42	THERMOPILE

### HOW TO CONFIGURE IN EOL MANAGER

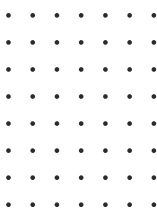
Open EOL Manager and go to *Settings* of the data logger you are working on. Open the *Inputs* tab and select the following type and model:

MS60S/MS60 (mV output)

- Group: Analog Inputs
- Sensor Type: Radiation
- Sensor Model: **Thermopile**

MS60S/MS60A (4-20mA output)












- Group: Analog Inputs
- Sensor Type: Radiation
- Sensor Model: **Thermopile**
- Slope: 401.6064
- Offset: -400



Last modified: 29.06.2021



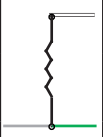












# EKO MS40 | PYRANOMETER



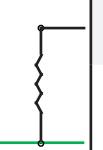







## SENSOR WIRING TABLE

Sensor Model	Manufacturer Cable Colors		Kintech AMPVAR* Kintech Colors				Orbit 360			EOL Zenith		
							Section	Terminal	Type	Section	Type	
 <b>MS40</b> mV output		Brown	A	K		Brown	Analog Channels	47 51 55 59 64 68 72 76 80 87	(-)	Analog Inputs		
		White	B	L		White	Analog Channels	48 52 56 60 65 69 73 77 81 84 85 86 90 91 92	Signal	Analog Inputs		
				H		Green	Power Input				Extra Analog	
				G		Do not connect					BAT	

**Note:** \*AMPVAR amplifier is provided by Kintech Engineering.

Consult to the Solar department ([solar@kintech-engineering.com](mailto:solar@kintech-engineering.com)) for its configuration and Slope and Offset.

Sensor Model	Sensor Pin Manufacturer Colors			Kintech Connector R: 249Ω (1%)				Orbit 360			EOL Zenith	
								Section	Terminal	Type	Section	Type
 <b>MS40S</b> 4-20mA output		Grey	Supply (-)	S			White	Analog Channels	47 51 55 59 64 68 72 76 80 87	(-)	Analog Inputs	
		White	4-20mA (-)	-			Black	Power Input		(-)	BAT	
		Brown	Supply (+)	+			Red	Power Input			BAT	
			Do not connected	+								
									Analog Channels	48 52 56 60 65 69 73 77 81 84 85 86 90 91 92	Signal	Analog Inputs Extra Analog

Sensor Model	Sensor Pin Manufacturer Colors			Kintech Connector R: 249Ω (1%)				Orbit 360			EOL Zenith	
								Section	Terminal	Type	Section	Type
 <b>MS40A</b> 4-20mA output		White	Signal (-)	B			Black	Analog Channels	47 51 55 59 64 68 72 76 80 87	(-)	Analog Inputs	
		Brown	Signal (+)	A			Red	Power Input			BAT	
									Analog Channels	48 52 56 60 65 69 73 77 81 84 85 86 90 91 92	Signal	Analog Inputs Extra Analog

**Note:** 4 mA → 0 W/m<sup>2</sup>; 20mA → 1600 W/m<sup>2</sup>

### REQUIRED DATA LOGGER VERSION

Minimum data logger required: **ORBIT 360 BASIC PLUS.**

Minimum **firmware** required: **any.**

## EKO MS40 | PYRANOMETER

**Important!** Please make sure you are working with the latest version of Atlas. To check for new updates click the *Check for updates* button in the left-hand menu located in the main dashboard.

### HOW TO CONFIGURE IN ATLAS

Start Atlas and open the data logger you are working on. Now go to *Site settings* and scroll down to the *Channels* section and select the following type and model:

MS40S/MS40 (mV output)

- Group: Analog channels
- Sensor Type: Radiation
- Sensor Model: **Thermopile**

MS40S/MS40A (4-20mA output)

- Group: Analog channels
- Sensor Type: Radiation
- Sensor Model: **Thermopile**
- Slope: 401.6064
- Offset: -400

### HOW TO CONFIGURE THIS SENSOR ON SITE

We recommend performing the entire sensor configuration using Atlas at the office before installing sensors onsite. Once the sensor is correctly setup in Atlas, use the *Upload settings* tool, to upload the sensor configuration to the data logger.

In case you are already on site and need to configure the sensor directly on the data logger, follow these steps:

1. Turn on the data logger.
2. Using the keypad on the data logger, navigate the menu until you see *Sensor model*, then click the “right arrow” on the keypad.
3. Now scroll down to the channel you are going to connect the sensor to, and click the “right arrow” on the keypad.
4. Now click “Set” on the keypad and scroll up in the menu to set the sensor model type according to the table here below. Once you have found the correct sensor model, click the “right arrow” key twice to select it and save.
5. Click the “left arrow” several times to go back to the main menu.

Data logger model	Firmware version	Sensor model type on data logger		
		Magnitude	Number	Name
ORBIT 360	any	Solar radiation	42	THERMOPILE
EOL ZENITH	any	Solar radiation	42	THERMOPILE

### HOW TO CONFIGURE IN EOL MANAGER

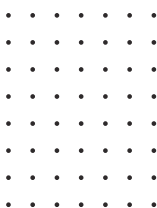
Open EOL Manager and go to *Settings* of the data logger you are working on. Open the *Inputs* tab and select the following type and model:

MS40S/MS40 (mV output)

- Group: Analog Inputs
- Sensor Type: Radiation
- Sensor Model: **Thermopile**

MS40S/MS40A (4-20mA output)






- Group: Analog Inputs
- Sensor Type: Radiation
- Sensor Model: **Thermopile**
- Slope: 401.6064
- Offset: -400



Last modified: 29.06.2021

# EKO MS802 | PYRANOMETER

## SENSOR WIRING TABLE

Sensor Model	Manufacturer Cable Colors		Kintech AMPVAR* Kintech Colors				Orbit 360			EOL Zenith	
							Section	Terminal	Type	Section	Type
	●	Black	A	K	●	Brown	Analog Channels	47 51 55 59 64 68 72 76 80 87	(-)	Analog Inputs	
	○	White					B	L		○	White
				H	●	Green	Power Input			Extra Analog	
				G		Do not connect				BAT	

**Note:** \*AMPVAR amplifier is provided by Kintech Engineering.

Consult to the Solar department ([solar@kintech-engineering.com](mailto:solar@kintech-engineering.com)) for its configuration and Slope and Offset.

### REQUIRED DATA LOGGER VERSION

Minimum data logger required: **ORBIT 360 BASIC PLUS**.

Minimum **firmware** required: **any**.

**Important!** Please make sure you are working with the latest version of Atlas. To check for new updates click the *Check for updates* button in the left-hand menu located in the main dashboard.

### HOW TO CONFIGURE IN ATLAS

Start Atlas and open the data logger you are working on. Now go to *Site settings* and scroll down to the *Channels* section and select the following type and model:

- Group: Analog channels
- Sensor Type: Radiation
- Sensor Model: **Thermopile**





# EKO MS802 | PYRANOMETER

## HOW TO CONFIGURE THIS SENSOR ON SITE

We recommend performing the entire sensor configuration using Atlas at the office before installing sensors onsite. Once the sensor is correctly setup in Atlas, use the *Upload settings* tool, to upload the sensor configuration to the data logger.

In case you are already on site and need to configure the sensor directly on the data logger, follow these steps:

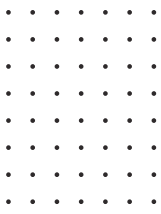
1. Turn on the data logger.
2. Using the keypad on the data logger, navigate the menu until you see *Sensor model*, then click the “right arrow” on the keypad.
3. Now scroll down to the channel you are going to connect the sensor to, and click the “right arrow” on the keypad.
4. Now click “Set” on the keypad and scroll up in the menu to set the sensor model type according to the table here below. Once you have found the correct sensor model, click the “right arrow” key twice to select it and save.
5. Click the “left arrow” several times to go back to the main menu.

Data logger model	Firmware version	Sensor model type on data logger		
		Magnitude	Number	Name
ORBIT 360	any	Solar radiation	42	THERMOPILE
EOL ZENITH	any	Solar radiation	42	THERMOPILE

## HOW TO CONFIGURE IN EOL MANAGER

Open EOL Manager and go to *Settings* of the data logger you are working on. Open the *Inputs* tab and select the following type and model:












- Group: Analog Inputs
- Sensor Type: Radiation
- Sensor Model: **Thermopile**



Last modified: 29.06.2021

# LICOR LI-200SZ | PYRANOMETER

## SENSOR WIRING TABLE

Sensor Model	Sensor Pin	Kintech AMPVAR* R:147Ω (0,1%)	Orbit 360			EOL Zenith			
			Section	Terminal	Type	Section	Type		
	Conductor		A	K	 Brown	Analog Channels	(-)	Analog Inputs	
	Shield		B	L	 White	Analog Channels	Signal	Analog Inputs	
				H	 Green	Power Input		Extra Analog	
				G	Do not connect			BAT	

**Note:** \*AMPVAR amplifier is provided by Kintech Engineering.

Consult to the Solar department ([solar@kintech-engineering.com](mailto:solar@kintech-engineering.com)) for its configuration and Slope and Offset.

### REQUIRED DATA LOGGER VERSION

Minimum data logger required: **ORBIT 360 BASIC PLUS**.

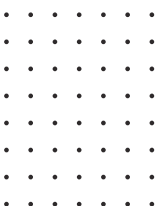
Minimum **firmware** required: **any**.

### HOW TO CONFIGURE IN ATLAS

Start Atlas and open the data logger you are working on. Now go to *Site settings* and scroll down to the *Channels* section and select the following type and model:

- Group: Analog channels
- Sensor Type: Radiation
- Sensor Model: **Thermopile**
- Slope: 409.6
- Offset: -407.962

**Important!** Please make sure you are working with the latest version of Atlas. To check for new updates click the *Check for updates* button in the left-hand menu located in the main dashboard.



## LICOR LI-200SZ | PYRANOMETER

### HOW TO CONFIGURE THIS SENSOR ON SITE

We recommend performing the entire sensor configuration using Atlas at the office before installing sensors onsite. Once the sensor is correctly setup in Atlas, use the *Upload settings* tool, to upload the sensor configuration to the data logger.

In case you are already on site and need to configure the sensor directly on the data logger, follow these steps:

1. Turn on the data logger.
2. Using the keypad on the data logger, navigate the menu until you see *Sensor model*, then click the “right arrow” on the keypad.
3. Now scroll down to the channel you are going to connect the sensor to, and click the “right arrow” on the keypad.
4. Now click “Set” on the keypad and scroll up in the menu to set the sensor model type according to the table here below. Once you have found the correct sensor model, click the “right arrow” key twice to select it and save.
5. Click the “left arrow” several times to go back to the main menu.

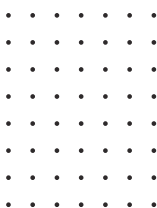
Data logger model	Firmware version	Sensor model type on data logger		
		Magnitude	Number	Name
ORBIT 360	any	Solar radiation	01	milliVolts
EOL ZENITH	any	Solar radiation	01	miliVolts

**Keep in mind:** if the sensor channel has been configured as milliVolts, the output values on data logger display will always be shown in milliVolts. Remember to fill in both the slope and the offset for the pyranometer sensor to see real sensor values in  $W/m^2$  in your datasets during a real-time connection with the data logger (from either Atlas or Atlas Mobile).

### HOW TO CONFIGURE IN EOL MANAGER

Open EOL Manager and go to *Settings* of the data logger you are working on. Open the *Inputs* tab and select the following type and model:

- Group: Analog Inputs
- Sensor Type: Radiation
- Sensor Model: **Thermopile**
- Slope: 409.6
- Offset: -407.962



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