

一、软件标定步骤（有砝码）

(这里以 10kg 量程传感器举例)

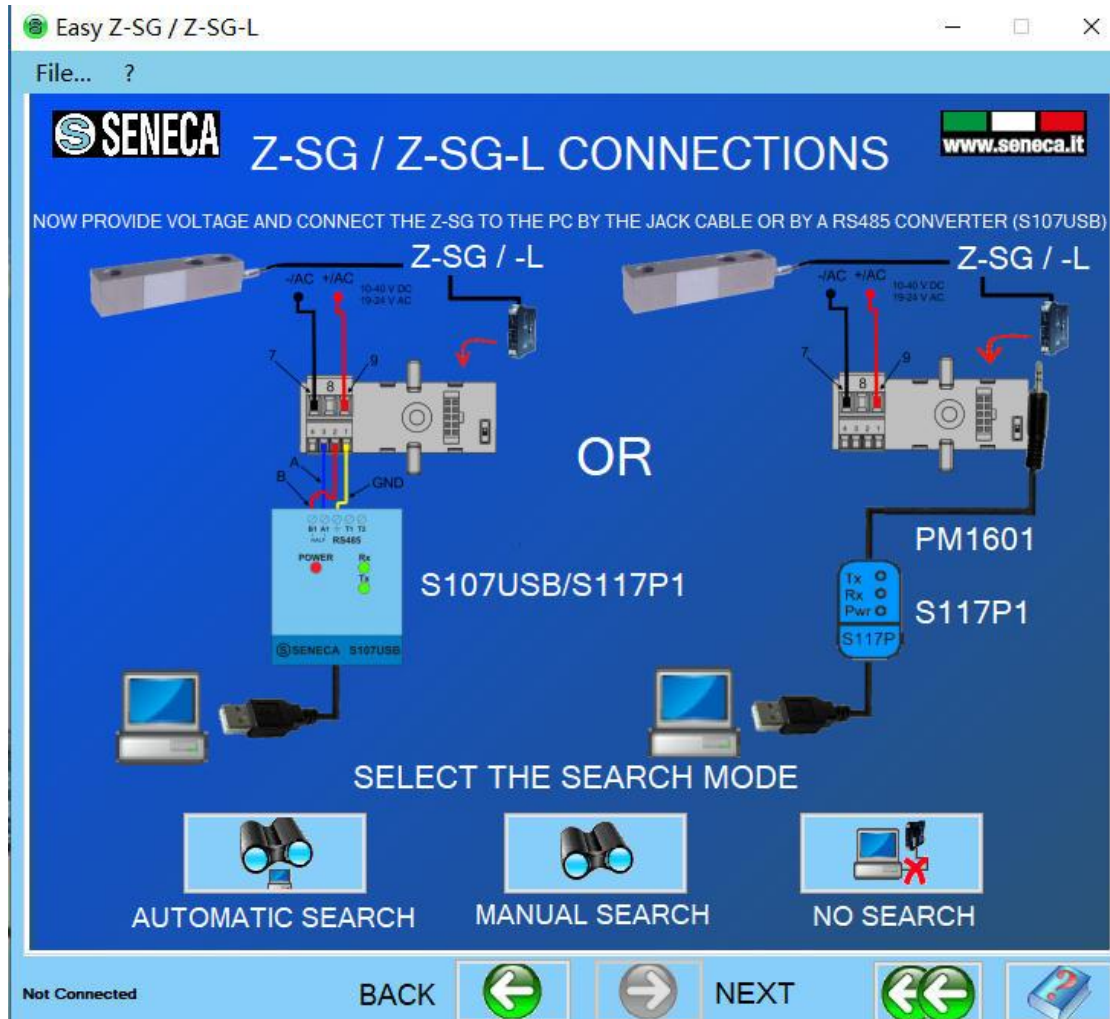
双击 Easy Setup 软件，在产品型号中选择 Z-SG，点击 Start 进入下一步



按照软件提示将放大器背板 SW1 拨片中 1、8 打到 ON 位置，点击 NEXT 进入下一步



使用带 microUSB 的数据线连接电脑(推荐 windows10 及以下系统), 点击
AUTOMATIC SEARCH



连接放大器 Z-SG 成功，点击 OK



左下角显示 Connected to Z-SG，点击 NEW CONFIGURATION 进入下一步



MODE 选: USE CALIBRATION WITH A STANDARD WEIGHT

WEIGHT MEASURE UNIT 选: g

CELL SENSIBILITY 填传感器铭牌标签的数值: 单位是 mV/V

STANDARD WEIGHT 填加载的标准砝码重量, 这里以 3000g 砝码演示

点击 NEXT 进入下一步

The screenshot shows the 'Easy Z-SG / Z-SG-L' software window. The title bar includes a file menu and window controls. The main interface has a blue background with the 'SENECA' logo and 'FUNCTIONING MODE' title. Below this, the 'MODE' is set to 'USE CALIBRATION WITH A STANDARD WEIGHT'. The 'POLARITY' is set to 'BIPOLAR: (compression and extension)'. The 'WEIGHT MEASURE UNIT' is set to 'g'. The 'CELL CONFIGURATION' section contains three input fields: 'CELL SENSIBILITY' with a value of '2.00000' and unit 'mV/V', 'CELL FULL SCALE' with a value of '10000.00' and unit 'g', and 'STANDARD WEIGHT' with a value of '3000.00' and unit 'g'. At the bottom, there is a status bar showing 'Connected to Z-SG/-L FW:1010' and navigation buttons: 'BACK', 'NEXT', and a double arrow button.

Easy Z-SG / Z-SG-L

File... ?

SENECA **FUNCTIONING MODE** www.seneca.it

MODE: **USE CALIBRATION WITH A STANDARD WEIGHT**

POLARITY: **ADC POLARITY** **BIPOLAR: (compression and extension)**

WEIGHT MEASURE UNIT: **g**

CELL CONFIGURATION

CELL SENSIBILITY: **2.00000** mV/V

CELL FULL SCALE: **10000.00** g

STANDARD WEIGHT VALUE: **STANDARD WEIGHT** **3000.00** g

Connected to Z-SG/-L FW:1010

BACK NEXT

ADC SPEED 选择最大 151.71Hz

NUMBER OF SAMPLES FOR MOVING AVERAGE: 这里选择 20

(根据需要来选, 数值越高越稳定, 但测量速度低)

MEASURE RESOLUTION: CONFIGURABLE

RESOLUTION: 30000 POINTS

(根据需要来选, 数值越高分辨率越高, 但稳定性低)

点击 NEXT 进入下一步

File... ?

SENECA   www.seneca.it

INPUT CHANNEL CONFIGURATION AND MEASURE STABILIZATION

ADC SPEED **151.71** Hz

STABILIZATION

NUMBER OF SAMPLES FOR MOVING AVERAGE **20**
HIGHER VALUES MEANS MORE STABILIZATION BUT LOWER MEASURE SPEED

MEASURE RESOLUTION **CONFIGURABLE**
HIGHER VALUES MEANS MORE RESOLUTION BUT LOWER STABILIZATION

RESOLUTION

RESOLUTION **30000** POINTS

Connected to Z-SG/-L FW:1010

BACK   NEXT  

不用操作，点击 NEXT 进入下一步

Easy Z-SG / Z-SG-L

File... ?

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DIGITAL INPUT/OUTPUT CONFIGURATION

IN/OUT MODE SELECT **DIGITAL INPUT ENABLE**

DIGITAL OUT CONFIGURATION

DIGITAL OUT MODE
The Gross Weight exceeds the Full Scale

THRESHOLD
THRESHOLD **5000.00** g

NC/NO
NC/NO OUT MODE **NORMALLY OPEN**

Connected to Z-SG/-L FW:1010

BACK   NEXT  

OUTPUT TYPE 选择: 0..10V
上限 10V 对应传感器量程 10000g
下限 0V 对应 0g
点击 NEXT 进入下一步

Easy Z-SG / Z-SG-L

File... ?

SENECA **ANALOG OUTPUT TYPE**
(ONLY Z-SG MODEL) 

OUTPUT TYPE 0..10V

ANALOG OUTPUT LINEARIZATION

LINEARIZATION FOR OUTPUT VALUE

10	V	For	10000.00	g
0	V	For	0.00	g

Connected to Z-SG/-L FW:1010

BACK   NEXT  

按照图示，点击 NEXT 进入下一步

Easy Z-SG / Z-SG-L

File... ?

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MODBUS CONFIGURATION

MODBUS CONFIGURATION FROM EEPROM

FLOATING POINT (ONLY Z-SG-L) FP H/L (STANDARD)

MODBUS PROTOCOL CONFIGURATION

MODBUS PROTOCOL

NEW MODBUS ADDRESS 1

NEW BAUD RATE 38400 Baud

PARITY BIT NO

RESPONSE DELAY 0

STABLE WEIGHT CONDITION

STABLE WEIGHT CONDITION D_{weight}/DT

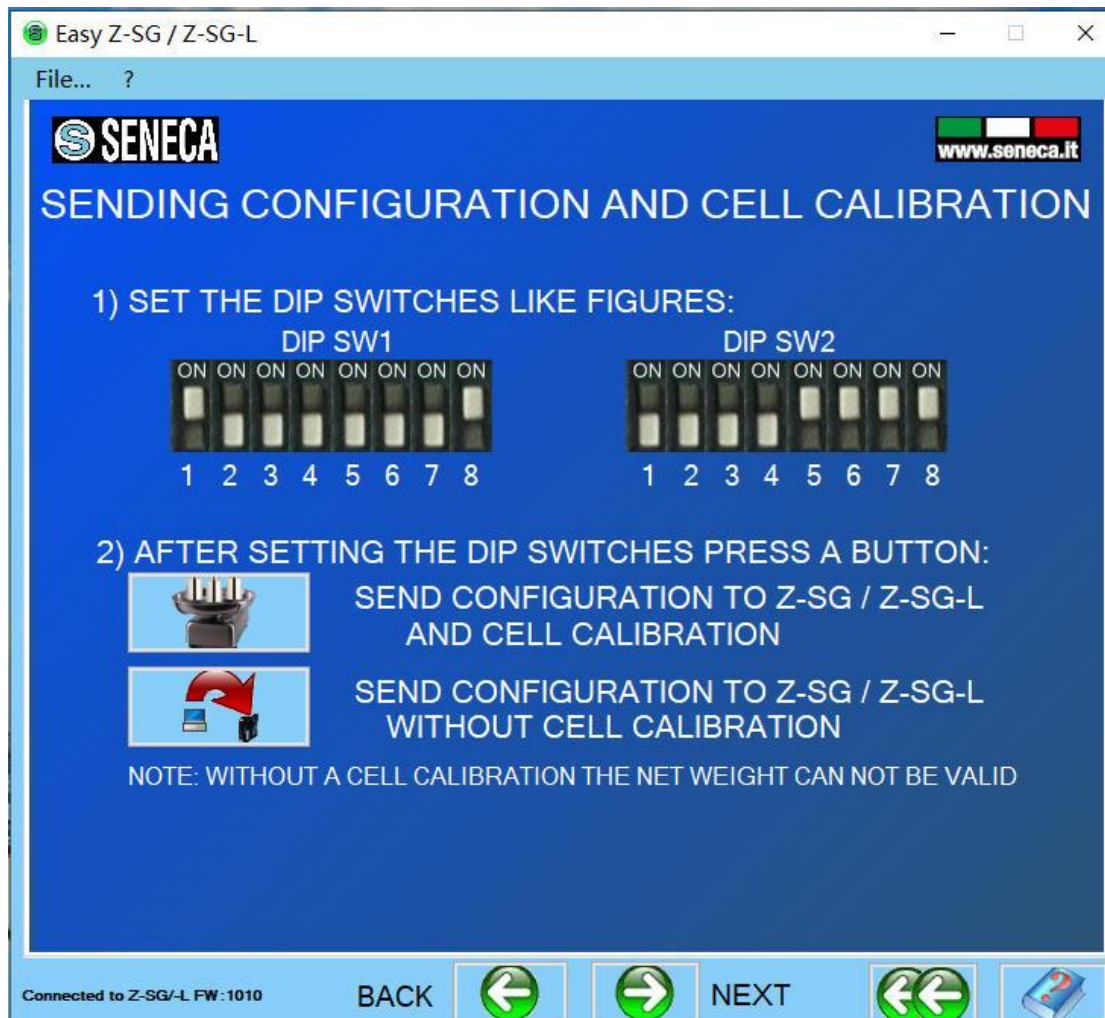
DELTA WEIGHT 1.00 g

DELTA TIME 1 x 100 ms

Connected to Z-SG/-L FW:1010

BACK   NEXT  

按照图示，将放大器背板 SW2 拨片中 5、6、7、8 打到 ON 位置
再点击



点击 OK



NEW STANDARD WEIGHT 显示的标准砝码 3000.00g 重量是将要加载的 ADC VALUE 与 NET WEIGHT 数值差不多稳定时点击：



去皮清零

Easy Z-SG / Z-SG-L

File... ?

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CELL CALIBRATION WITH A STANDARD WEIGHT

STANDARD WEIGHT MODIFY

FOR BEST RESULT STANDARD WEIGHT+TARE MUST BE AS CLOSE AS POSSIBLE TO THE CELL FULL SCALE

NEW STANDARD WEIGHT = SET THE NEW STANDARD WEIGHT 

VALUES

ADC VALUE	33717
NET WEIGHT	255.1834

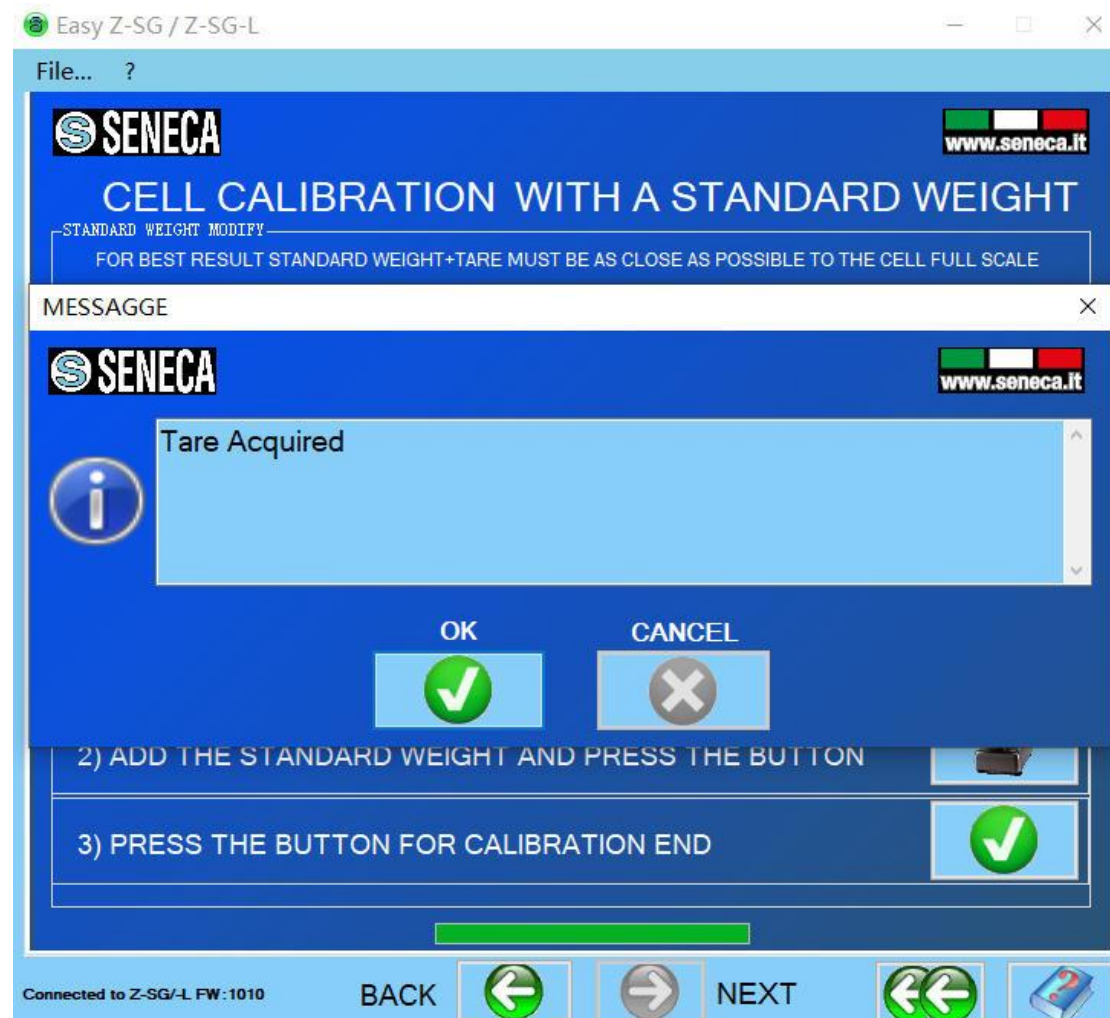
CALIBRATION

- 1) PLACE THE TARE ON THE CELL AND PRESS THE BUTTON 
- 2) ADD THE STANDARD WEIGHT AND PRESS THE BUTTON 
- 3) PRESS THE BUTTON FOR CALIBRATION END 

Connected to Z-SG/-L FW:1010

BACK   NEXT  

点击 OK



给传感器加载前面准备的 3000g 砝码，尽量让砝码加载到传感器正中心
ADC VALUE 与 NET WEIGHT 数值差不多稳定时点击：



Easy Z-SG / Z-SG-L

File... ?

SENECA  www.seneca.it

CELL CALIBRATION WITH A STANDARD WEIGHT

STANDARD WEIGHT MODIFY

FOR BEST RESULT STANDARD WEIGHT+TARE MUST BE AS CLOSE AS POSSIBLE TO THE CELL FULL SCALE

NEW STANDARD WEIGHT = SET THE NEW STANDARD WEIGHT 

VALUES

ADC VALUE	43325
NET WEIGHT	3000.2660

CALIBRATION

- 1) PLACE THE TARE ON THE CELL AND PRESS THE BUTTON 
- 2) ADD THE STANDARD WEIGHT AND PRESS THE BUTTON 
- 3) PRESS THE BUTTON FOR CALIBRATION END 

Connected to Z-SG/-L FW:1010

BACK   NEXT  

点击 OK

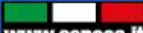


ADC VALUE 与 NET WEIGHT 数值差不多稳定时点击：



Easy Z-SG / Z-SG-L

File... ?

SENECA   www.seneca.it

CELL CALIBRATION WITH A STANDARD WEIGHT

STANDARD WEIGHT MODIFY

FOR BEST RESULT STANDARD WEIGHT+TARE MUST BE AS CLOSE AS POSSIBLE TO THE CELL FULL SCALE

NEW STANDARD WEIGHT = SET THE NEW STANDARD WEIGHT 

VALUES

ADC VALUE	43325
NET WEIGHT	3000.2500

CALIBRATION

- 1) PLACE THE TARE ON THE CELL AND PRESS THE BUTTON 
- 2) ADD THE STANDARD WEIGHT AND PRESS THE BUTTON 
- 3) PRESS THE BUTTON FOR CALIBRATION END 

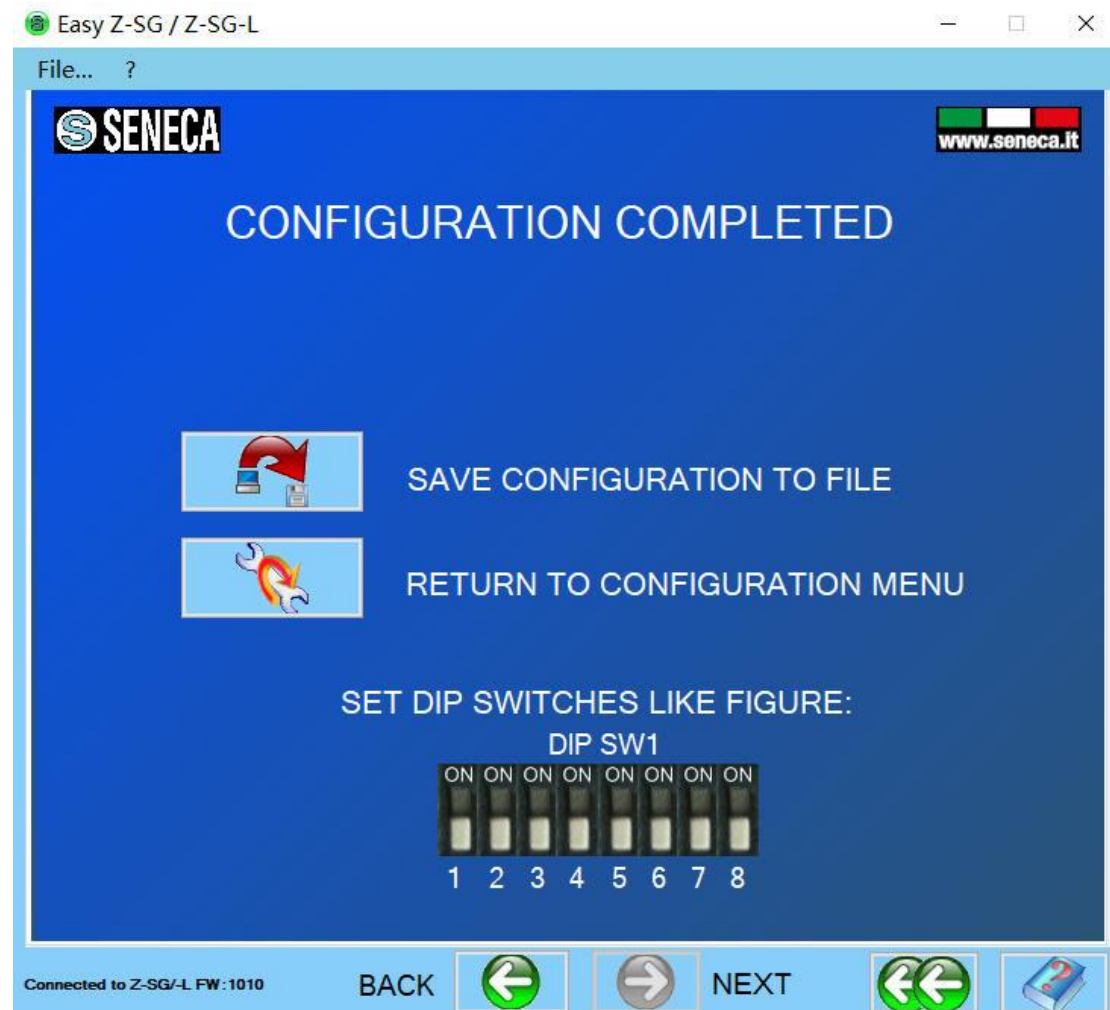
Connected to Z-SG/-L FW:1010

BACK   NEXT  

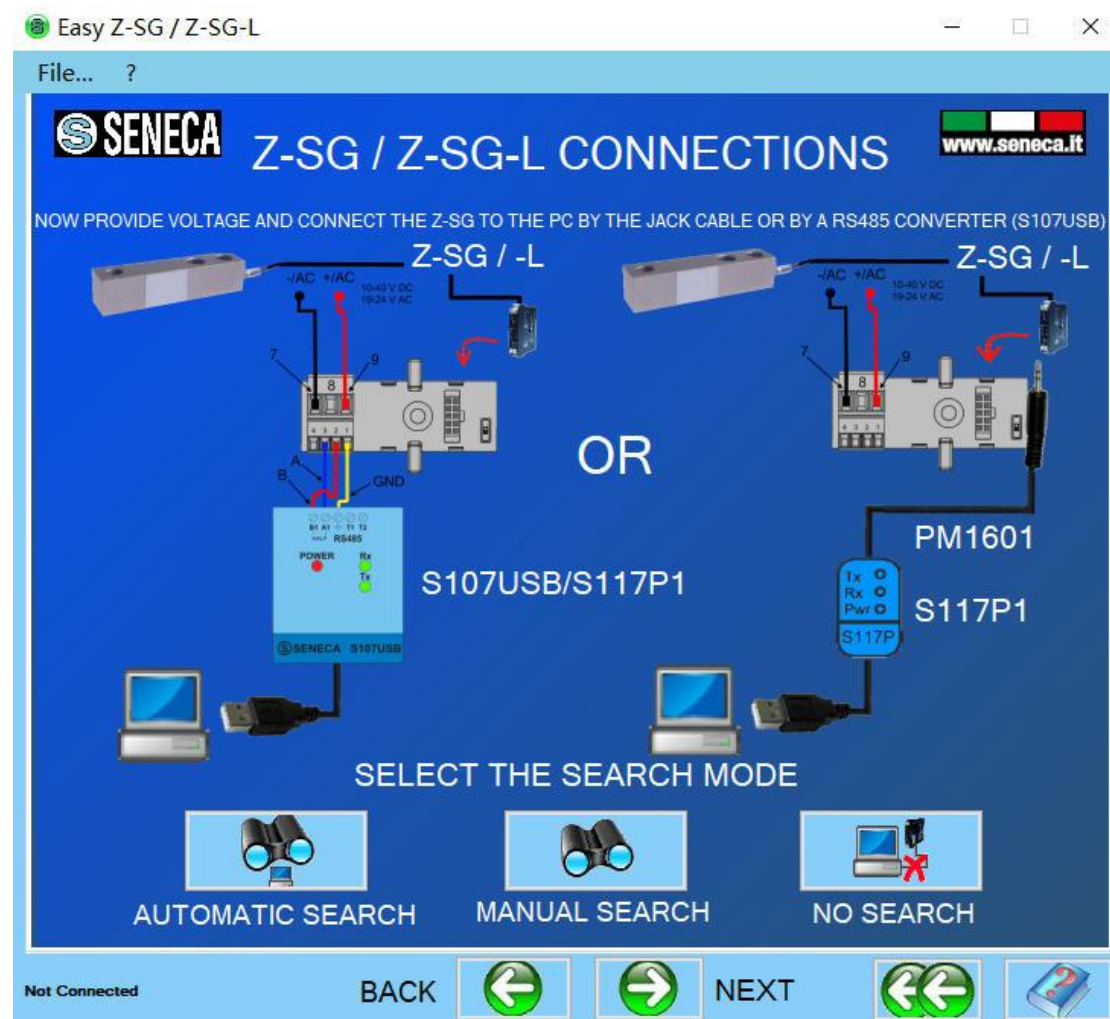
设置完成，显示 CONFIGURATION COMPLETED
可将放大器背板 SW1 拨片全部调到 OFF，也可不调
点击



进入下一个放大器传感器组合标定



将 microUSB 的数据线插入下一个放大器传感器组合，点击 AUTOMATIC SEARCH



传感器加载的总载荷不要超过其额定量程

二、软件标定步骤（无砝码）

(这里以 10kg 量程传感器举例)

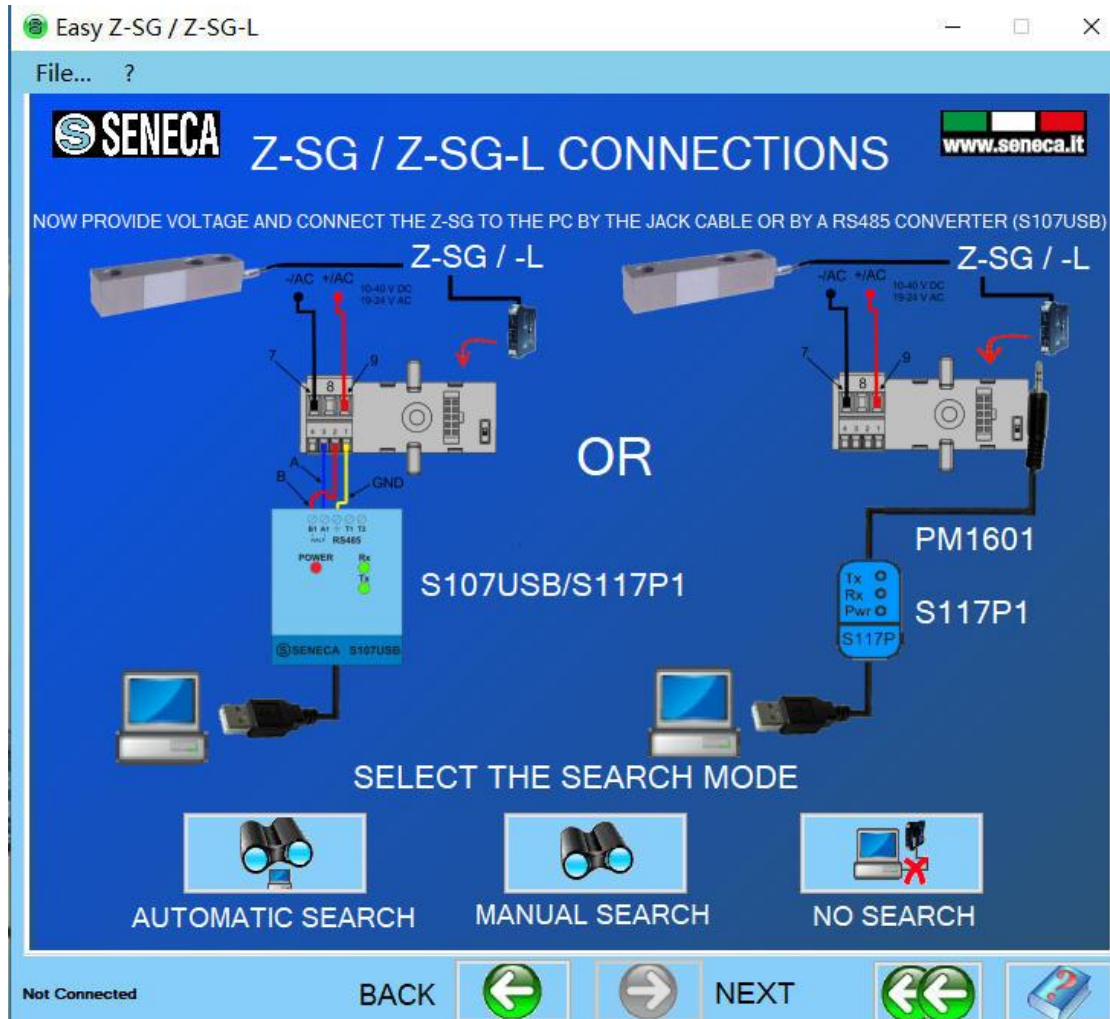
双击 Easy Setup 软件，在产品型号中选择 Z-SG，点击 Start 进入下一步



按照软件提示将放大器背板 SW1 拨片中 1、8 打到 ON 位置，点击 NEXT 进入下一步



使用带 microUSB 的数据线连接电脑(推荐 windows10 及以下系统), 点击
AUTOMATIC SEARCH



连接放大器 Z-SG 成功，点击 OK



左下角显示 Connected to Z-SG，点击 NEW CONFIGURATION 进入下一步



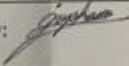
MODE 选: USE FACTORY CALIBRATION

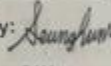
WEIGHT MEASURE UNIT 选: g

CELL SENSIBILITY 填传感器出厂报告上的数值(不是传感器铭牌上的数值): 单位是 mV/V

Calibration Certificate			
Model	DBSM-10	Serial No.	AA019215
Rated capacity	10 kgf	Compensated temp. range	-10 ~ 70°C
Rated output	2.0280 mV/V	Temp. effect on R.O.	≤ 0.40% LOAD/10°C
Input resistance	353.1 Ω	Temp. effect on zero bal.	≤ 0.20% R.O./10°C
Output resistance	353.0 Ω	Insulation resistance	2,000MΩ at 50V DC
Non-linearity	≤ 0.05% R.O.	Excitation, recommended	5 VDC
Hysteresis	≤ 0.05% R.O.	Excitation, maximum	10 VDC
Non-repeatability	≤ 0.03% R.O.	Load Type	Compression & Tension
Zero Balance	≤ 1.00% R.O.	Safe overload	300 % R.C.
Creep (in 20min.)	≤ 0.03% R.O.	Ultimate overload	1000 % R.C.

Date: 2026-07-09

Tested by: 
J.H. Kim

Inspected by: 
S.H. Lee


www.bongshin.com

CELL FULL SCALE 填传感器的额定量程: 10000g

点击 NEXT 进入下一步

Easy Z-SG / Z-SG-L

File... ?

SENECA **FUNCTIONING MODE**  www.seneca.it

MODE **USE FACTORY CALIBRATION**

POLARITY **ADC POLARITY BIPOLAR: (compression and extension)**

WEIGHT MEASURE UNIT **g**

CELL CONFIGURATION

CELL SENSIBILITY **2.00000** mV/V

CELL FULL SCALE **10000.00** g

STANDARD WEIGHT VALUE **10000.00** g

Connected to Z-SG/L FW:1010

BACK   NEXT  

ADC SPEED 选择最大 151.71Hz

NUMBER OF SAMPLES FOR MOVING AVERAGE: 这里选择 20

(根据需要来选, 数值越高越稳定, 但测量速度低)

MEASURE RESOLUTION: CONFIGURABLE

RESOLUTION: 30000 POINTS

(根据需要来选, 数值越高分辨率越高, 但稳定性低)

点击 NEXT 进入下一步

Easy Z-SG / Z-SG-L

File... ?

SENECA  www.seneca.it

**INPUT CHANNEL CONFIGURATION AND
MEASURE STABILIZATION**

ADC SPEED **151.71** Hz

STABILIZATION

NUMBER OF SAMPLES FOR MOVING AVERAGE **20**
HIGHER VALUES MEANS MORE STABILIZATION BUT LOWER MEASURE SPEED

MEASURE RESOLUTION **CONFIGURABLE**
HIGHER VALUES MEANS MORE RESOLUTION BUT LOWER STABILIZATION

RESOLUTION

RESOLUTION **30000** POINTS

Connected to Z-SG/-L FW:1010

BACK   NEXT  

不用操作，点击 NEXT 进入下一步

Easy Z-SG / Z-SG-L

File... ?

SENECA   www.seneca.it

DIGITAL INPUT/OUTPUT CONFIGURATION

IN/OUT MODE SELECT **DIGITAL INPUT ENABLE**

DIGITAL OUT CONFIGURATION

DIGITAL OUT MODE
The Gross Weight exceeds the Full Scale

THRESHOLD
THRESHOLD **5000.00** g

NC/NO
NC/NO OUT MODE **NORMALLY OPEN**

Connected to Z-SG/-L FW:1010

BACK   NEXT  

OUTPUT TYPE 选择: 0..10V
上限 10V 对应传感器量程 10000g
下限 0V 对应 0g
点击 NEXT 进入下一步

Easy Z-SG / Z-SG-L

File... ?

SENECA **ANALOG OUTPUT TYPE**
(ONLY Z-SG MODEL) 

OUTPUT TYPE 0..10V

ANALOG OUTPUT LINEARIZATION

LINEARIZATION FOR OUTPUT VALUE

10	V	For	10000.00	g
0	V	For	0.00	g

Connected to Z-SG/-L FW:1010

BACK   NEXT  

按照图示，点击 NEXT 进入下一步

Easy Z-SG / Z-SG-L

File... ?

SENECA   www.seneca.it

MODBUS CONFIGURATION

MODBUS CONFIGURATION FROM EEPROM

FLOATING POINT (ONLY Z-SG-L) FP H/L (STANDARD)

MODBUS PROTOCOL CONFIGURATION

MODBUS PROTOCOL

NEW MODBUS ADDRESS 1

NEW BAUD RATE 38400 Baud

PARITY BIT NO

RESPONSE DELAY 0

STABLE WEIGHT CONDITION

STABLE WEIGHT CONDITION D_{weight}/DT

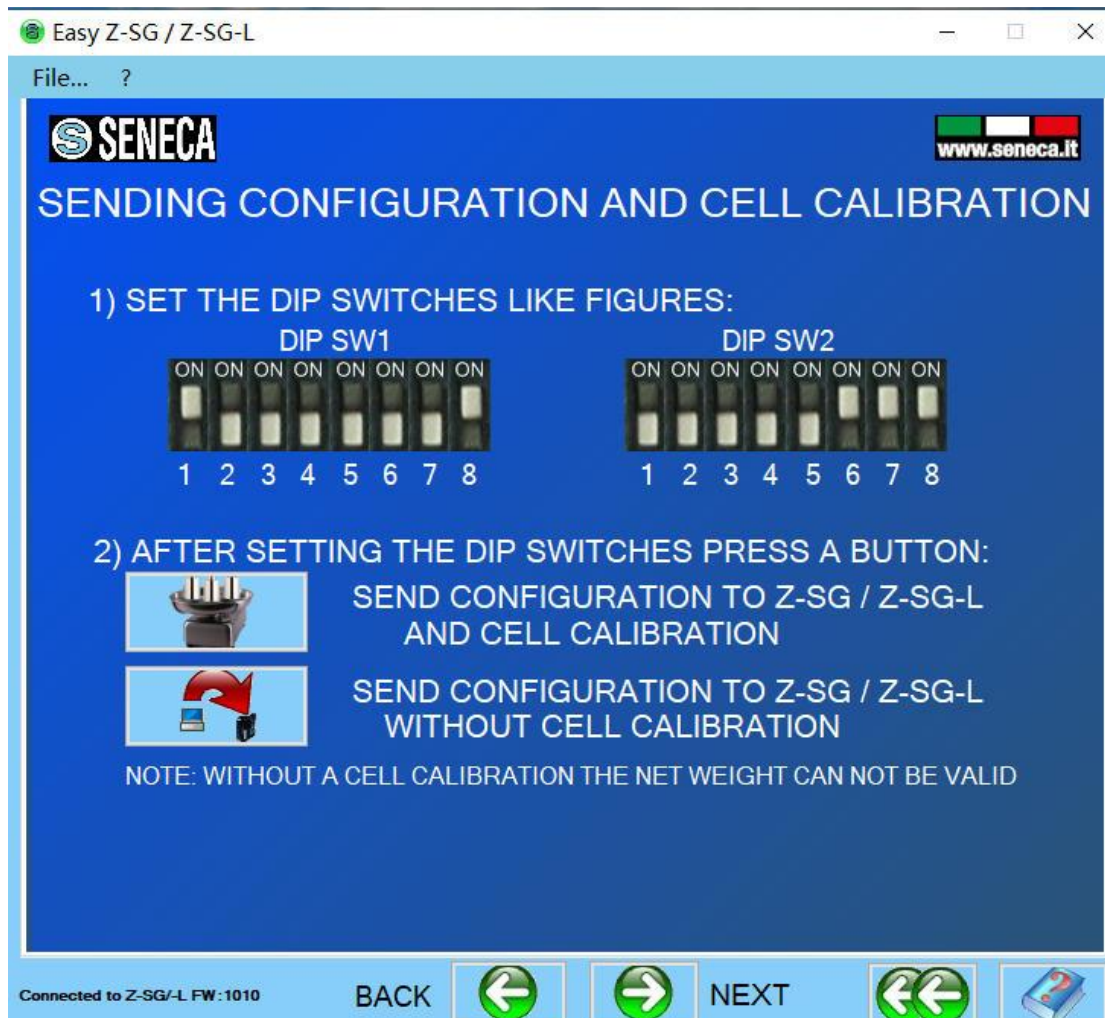
DELTA WEIGHT 1.00 g

DELTA TIME 1 x 100 ms

Connected to Z-SG/-L FW:1010

BACK   NEXT  

按照图示，将放大器背板 SW2 拨片中 6、7、8 打到 ON 位置
再点击



点击 OK



ADC VALUE 与 NET WEIGHT 数值差不多稳定时点击：



去皮清零

Easy Z-SG / Z-SG-L

File... ?

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CELL CALIBRATION WITHOUT KNOWN WEIGHT

VALUES

ADC VALUE	33718
NET WEIGHT	255.3554

CALIBRATION

1) PLACE THE TARE ON THE CELL AND PRESS THE BUTTON 

2) PRESS THE BUTTON FOR CALIBRATION END 

Connected to Z-SG/-L FW:1010

BACK   NEXT  

点击 OK



ADC VALUE 与 NET WEIGHT 数值差不多稳定时点击：



Easy Z-SG / Z-SG-L

File... ?

SENECA   www.seneca.it

CELL CALIBRATION WITHOUT KNOWN WEIGHT

VALUES

ADC VALUE	33714
NET WEIGHT	-0.4062

CALIBRATION

1) PLACE THE TARE ON THE CELL AND PRESS THE BUTTON 

2) PRESS THE BUTTON FOR CALIBRATION END 

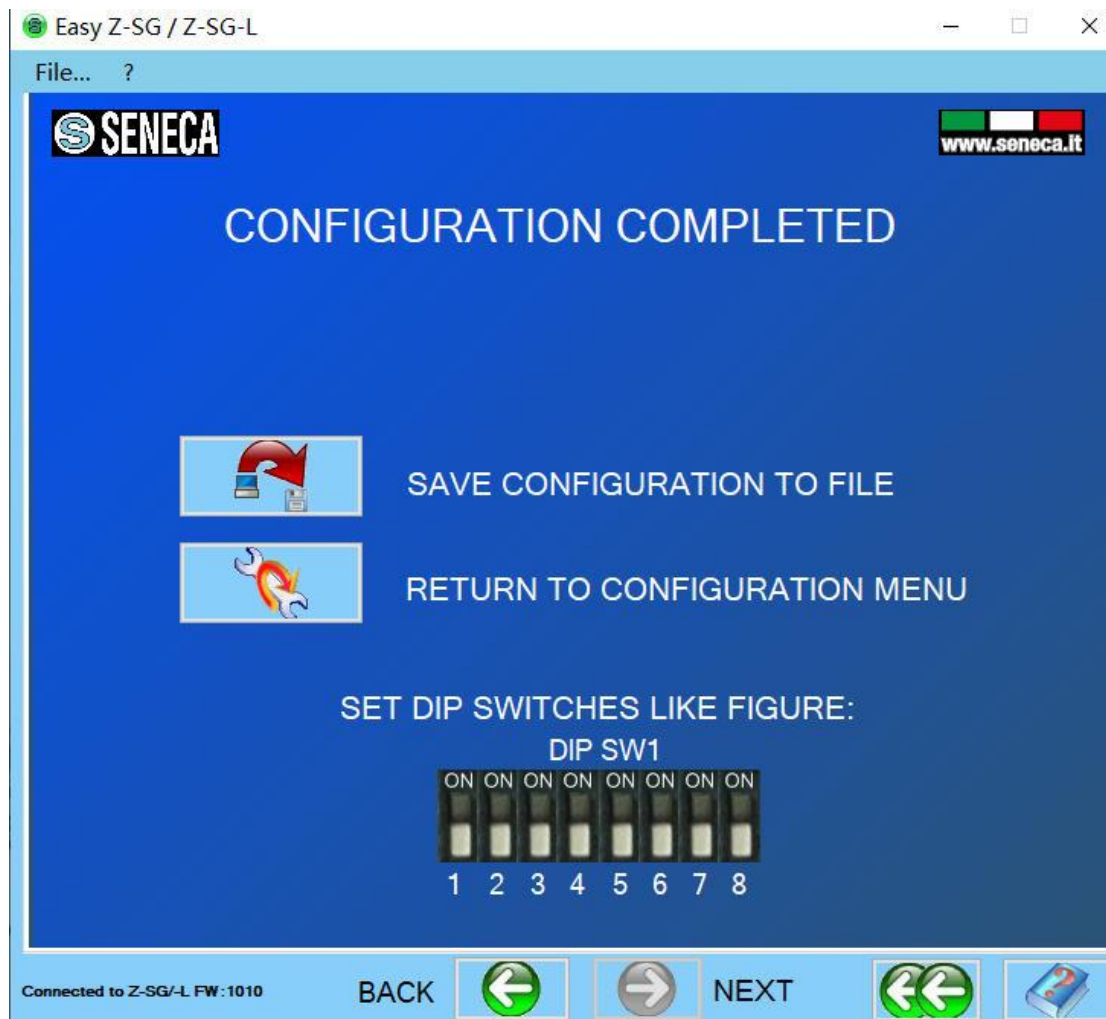
Connected to Z-SG/-L FW:1010

BACK   NEXT  

设置完成，显示 CONFIGURATION COMPLETED
可将放大器背板 SW1 拨片全部调到 OFF，也可不调
点击



进入下一个放大器传感器组合标定



将 microUSB 的数据线插入下一个放大器传感器组合，点击 AUTOMATIC SEARCH

